

Wenqiang Xu

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EDUCATION

Shanghai Jiao Tong University (Wen-Tsün Wu Honorable Class) <i>PhD in Computer Science</i>	Shanghai, China <i>Sep. 2019 – Sep. 2023</i>
Shanghai Jiao Tong University <i>M.Sc in Computer Science</i>	Shanghai, China <i>Sep. 2017 – June 2019</i>
University of Science and Technology of China (School of the Gifted Young) <i>Bachelor in Organic Chemistry</i>	Anhui, China <i>Sep. 2011 – June 2015</i>

EXPERIENCE

National University of Singapore <i>Research Manager</i> <ul style="list-style-type: none">Dexterous Manipulation.	Oct. 2025 – Present <i>Advisor: Prof. Lin Shao</i>
Shanghai Jiao Tong University <i>Assistant Researcher</i> <ul style="list-style-type: none">Visual-tactile learning.	Sep. 2023 – Aug. 2025 <i>Advisor: Prof. Cewu Lu</i>
National University of Singapore <i>Visiting Scholar</i> <ul style="list-style-type: none">Robot-assisted dressing.	Mar. 2023 – Sep. 2023 <i>Advisor: Prof. Lin Shao</i>

SELECTED PUBLICATIONS

First and co-first author works. (*=Equal Contribution)

- FBI: Learning Dexterous In-hand Manipulation with Dynamic Visuotactile Shortcut Policy**, *ICRA '25*
Yijin Chen*, **Wenqiang Xu***, Zhenjun Yu, Tutian Tang, Yutong Li, Siqiong Yao, and Cewu Lu
- Dynamic Reconstruction of Hand-Object Interaction with Distributed Force-aware Contact Representation**, *ICCV '25*
Zhenjun Yu*, **Wenqiang Xu***, Pengfei Xie, Yutong Li, Brian Anthony, Zhuorui Zhang, and Cewu Lu
- Capturing forceful interaction with deformable objects using a deep learning-powered stretchable tactile array**, *Nature Communications '24*
Chunpeng Jiang*, **Wenqiang Xu***, Yutong Li, Zhenjun Yu, Longchun Wang, Xiaotong Hu, Zhengyi Xie, Qingkun Liu, Bin Yang, Xiaolin Wang, Wenxin Du, Tutian Tang, Dongzhe Zheng, Siqiong Yao, Cewu Lu, and Jingquan Liu
- Differentiable Fluid Physics Parameter Identification By Stirring and For Stirring**, *IROS '24*
Oral Pitch
Wenqiang Xu, Dongzhe Zheng, Yutong Li, Jieji Ren, and Cewu Lu
- DiPGrasp: Parallel Local Searching for Efficient Differentiable Grasp Planning**, *RA-L '24*
Wenqiang Xu, Jieyi Zhang, Tutian Tang, Zhenjun Yu, Yutong Li, and Cewu Lu
- MS-MANO: Enabling Hand Pose Tracking with Biomechanical Constraints**, *CVPR '24*
Pengfei Xie*, **Wenqiang Xu***, Tutian Tang, Zhenjun Yu, and Cewu Lu
- TacIPC: Intersection- and Inversion-free FEM-based Elastomer Simulation For Optical Tactile Sensors**, *RA-L '24*
Wenxin Du*, **Wenqiang Xu***, Jieji Ren, Zhenjun Yu, and Cewu Lu

- **Precise Robotic Needle-Threading with Tactile Perception and Reinforcement Learning**, *CoRL '23*
Zhenjun Yu*, **Wenqiang Xu***, Siqiong Yao, Jieji Ren, Tutian Tang, Yutong Li, Guoying Gu, Cewu Lu
- **ClothPose: A Real-world Benchmark for Visual Analysis of Garment Pose via An Indirect Recording Solution**, *ICCV '23 Oral*
Wenqiang Xu, Wenxin Du, Han Xue, Yutong Li, Ruolin Ye, Yanfeng Wang, Cewu Lu
- **RFUniverse: A Multiphysics Simulation Platform for Embodied AI**, *RSS '23*
Haoyuan Fu*, **Wenqiang Xu***, Ruolin Ye*, Han Xue, Zhenjun Yu, Tutian Tang, Yutong Li, Wenxin Du, Jieyi Zhang, Cewu Lu
- **Visual-Tactile Sensing for In-Hand Object Reconstruction**, *CVPR '23*
Wenqiang Xu, Zhenjun Yu, Han Xue, Ruolin Ye, Siqiong Yao, Cewu Lu
- **RCareWorld: A Human-centric Simulation World for Caregiving Robots**, *IROS '22 Best RoboCup Award Winner, Best Paper Finalist*
Ruolin Ye*, **Wenqiang Xu***, Haoyuan Fu, Rajat Kumar Jenamani, Vy Nguyen, Cewu Lu, Katherine Dimitropoulou, Tapomayukh Bhattacharjee
- **H2O: A Benchmark for Visual Human-human Object Handover Analysis**, *ICCV '21*
Ruolin Ye*, **Wenqiang Xu***, Zhendong Xue, Tutian Tang, Yanfeng Wang, Cewu Lu
- **Explicit shape encoding for real-time instance segmentation**, *ICCV '19*
Wenqiang Xu, Haiyang Wang, Fubo Qi, Cewu Lu
- **Srda: Generating instance segmentation annotation via scanning, reasoning and domain adaptation**, *ECCV '18*
Wenqiang Xu, Yonglu Li, Cewu Lu

AWARDS

Forbes 30 Under 30 China	2025
MIT C.C Tung Global Collaboration Fellowship	2025
Yunfan Award	WAIC, 2021